

As previously noted by the Examiner, upon the allowance of a generic claim, Applicants will be entitled to consideration of claims to additional species which are written in dependent form or otherwise include all the limitations of an allowed generic claim as provided by 37 C.F.R. § 1.141. As acknowledged by the Examiner, claims 1 and 29 are generic. Accordingly, upon the allowance of either generic claim 1 or 29, Applicants respectfully request that the Examiner consider claims to non-elected species (i.e., claims 12-15 and 23-40).

Applicants respectfully direct the Examiner's attention to the fact that the Attorney Docket Number was changed to M4065.0802/P802 along with the Revocation of Power of Attorney and New Power of Attorney submitted on January 31, 2003. It is requested that all future correspondence contain this new Attorney Docket Number.

Claims 1-6, 9-11, 16-19, and 21-22 stand rejected under 35 U.S.C. § 102(e) as being anticipated by Zhou et al. (US 5,965,871). Applicants respectfully traverse this rejection and request reconsideration.

Claim 1, recites a method of processing pixel levels comprising, *inter alia*, "clamping a pixel readout line to a voltage level less than a voltage corresponding to a pixel signal; [and] subsequently coupling the pixel readout line to an output of an n-MOS source-follower and reading out the pixel signal onto the pixel readout line through the n-MOS source-follower" (emphasis added). Claims 16 and 22 recite an imager comprising, *inter alia*, "a pixel readout line; a ... pixel sensor ...; and a controller configured to provide control signals to cause the pixel readout line to be clamped to a voltage level less than a voltage corresponding to a signal sensed by the sensor, and subsequently to cause the sensor signal to be read out through the n-MOS source-follower to the pixel readout line" (emphasis added). Zhou et al. does not disclose these limitations of claims 1, 16, and 22.

While the Office Action points to Zhou et al., an Col. 5, ln. 32-36, as disclosing those limitations of claims 1, 16, and 22, such disclosure is absent from Zhou et al. To the contrary, Zhou et al. discloses “[w]hen reset transistor 38 is turned ON by the application of a RESET signal to gate 41, sensing node 36 is clamped to VDD which exerts a reverse bias on photo-diode 34 to induce the depletion.” Col. 5, ln. 32-36 (emphasis added). The sensing node 36 is not equivalent to the “pixel readout line” of claims 1, 16, and 22. Even the Office Action acknowledges at paragraph 3 that column bus 16 corresponds to the “pixel readout line” PXO, and not sensing node 36.

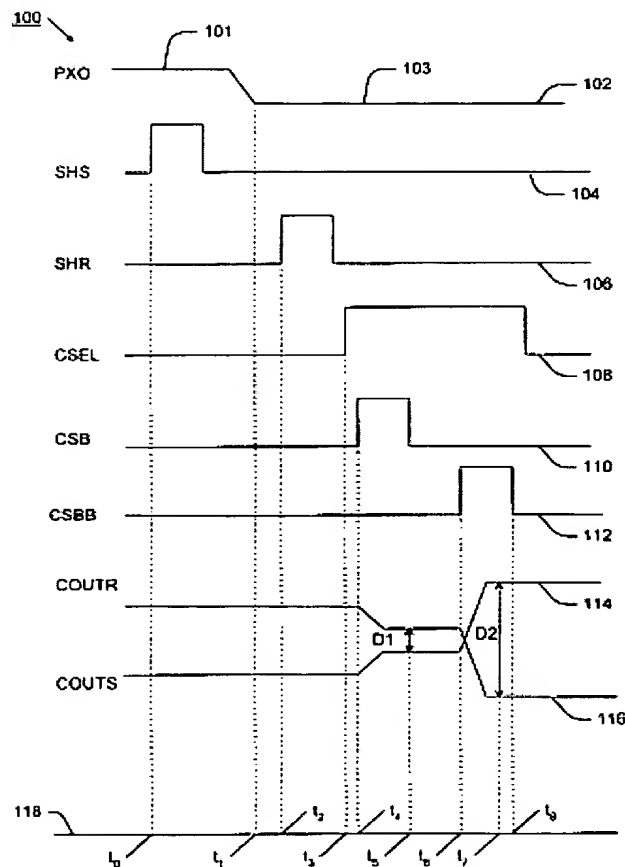
Further, even if it were equivalent, which it is not, sensing node 36 is not clamped to “a voltage less than a voltage corresponding to a pixel signal” or “a voltage less than a voltage corresponding to a signal sensed by the sensor” as recited in claims 1, 16, and 22, since sensing node 36 is clamped to VDD, which is, necessarily, the highest voltage possible in the pixel structure.

The Office Action states also points to Zhou et al. as disclosing an APS being clamped by being reset, however, there is no disclosure whatsoever in Zhou et al. to clamp a pixel output line to any voltage, much less to a voltage level less than a voltage corresponding to a pixel signal as recited in claims 1, 16, and 22.

In addition, Zhou et al. does not disclose clamping a pixel readout line to a voltage level less than a voltage corresponding to a pixel signal, and subsequently coupling the pixel readout line to an output of an n-MOS source-follower and reading out the pixel signal as recited in claim 1. Zhou et al. also does not disclose a controller configured to provide control signals to cause the pixel readout line to be clamped to a voltage level less than a voltage corresponding to a signal sensed by the sensor, and subsequently to cause the sensor signal to be read out as recited in claims 16 and 22. To

the contrary, Zhou et al. discloses in FIG. 4 (reproduced below) a light dependent image signal level 101 sampled before a reset reference level 103.

Zhou et al. FIG. 4



When the operation is repeated, it would be for a subsequent pixel or for a new image sensor signal, which signifies that it would not be the same sensor signal. At least for these reasons, claims 1, 16, and 22 are allowable over Zhou et al.

Claims 2-6, 9-11, 17-19, and 21 depend from claims 1 and 16 and are allowable over Zhou et al. at least for the reasons mentioned above, and also because Zhou et al. fails to teach or suggest the respective inventive combinations defined by claims 2-6, 9-11, 17-19, and 21.

In view of the above, Applicants believe the pending application is in condition for allowance.

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Respectfully submitted,

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